

REMARKS

Applicant has considered the Office Action mailed on January 2, 2004.

Applicant appreciates the allowance of claims 1-4 and 25-29 and the indication that claims 8-9 and 31 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 5-8, 11, and 17 are amended, and claims 32-40 are added; as a result, claims 1-19 and 25-40 are now pending in this application.

Applicant notes that this and the other rejections made by the Examiner in this Office Action mention U.S. 6,239,366 as being associated with Misawa. Applicant understands this to be a typographical error, and that the Examiner is making a rejection based on Misawa (U.S. 5,119,168) as cited in the Notice of References Cited provided to Applicant as part of this Office Action. Applicant requests prompt notice if this understanding is not correct.

§102 Rejection of the Claims

Claims 5-7, 10 and 15-16 were rejected under 35 USC § 102(b) as being anticipated by Misawa (U.S. 5,119,168). Anticipation requires that each element of a claim be shown in a single reference. Independent claim 5 as amended above recites that the first power line has a width greater than the width of each of the second power line and the third power line. In contrast, the "prior art" description set forth in Misawa and cited by the Examiner shows low-level and high-level supply lines 22 and 24 as having the same width. In particular, see Fig. 2 which shows that lines 22 and 24 have the same width "W". Misawa does not anywhere disclose that these power lines have a different width.

In light of the above, Misawa does not disclose a first power line with a width greater than the second or third power line as recited in Applicant's claim 5. Therefore, Misawa does not anticipate Applicant's independent claim 5.

§103 Rejection of the Claims

Claims 11-14 were rejected under 35 USC § 103(a) as being unpatentable over Misawa in view of Aggarwal et al. (U.S. 6,388,332). Applicant's claims 11-14 depend, directly or

indirectly, from Applicant's independent claim 5. As discussed above, Misawa does not disclose a first power line with a width greater than the second or third power line. Further, Misawa teaches the use of the same power line supply widths and does not suggest otherwise.

Aggarwal was cited by the Examiner for its teaching of the providing of a ground voltage and a positive voltage for a device. Aggarwal discusses the use of vias and the vertical positioning of power supply components relative to the surface of a device. However, Aggarwal is not generally directed to the horizontal layout of a power distribution system.

As was the case for Misawa, Aggarwal does not teach the relative widths of power supply lines in the layout of a power distribution system. Indeed, Applicant did not find any discussion of such relative widths by Aggarwal. Also, Fig. 6 of Aggarwal does not provide any indication or express notation that the relative widths of power lines are different. Moreover, nothing in Aggarwal teaches the use of a first power line with a greater width as recited in Applicant's claim 5. Because Aggarwal is not directed to power supply line relative widths, a person of ordinary skill would find no suggestion in, and have no motivation based on, Aggarwal to use differing line widths.

Neither Misawa or Aggarwal teaches or suggests that the first power line has a width greater than the width of each of the second power line and the third power line as recited in Applicant's independent claim 5. Therefore, Applicant's claim 5, and its dependent claims 11-14, are not obvious in light of Misawa and Aggarwal.

Claims 17-19 were rejected under 35 USC § 103(a) as being unpatentable over Misawa. Applicant's claims 17-19 depend, directly or indirectly, from Applicant's independent claim 5. As discussed above, Misawa does not disclose a first power line with a width greater than the second or third power line as recited in Applicant's claim 5 as now amended. Further, Misawa teaches the use of similar power line supply widths and does not suggest otherwise. Therefore, Applicant's claims 17-19 are not obvious for at least this reason.

Claim 30 was rejected under 35 USC § 103(a) as being unpatentable over Aggarwal et al. Applicant's independent claim 30 recites that the image circuit block layout has a substantially identical layout to the master circuit block layout. The Examiner has referred to blocks 32 and 34 of Aggarwal. However, Fig. 6 of Aggarwal shows these blocks as having clearly different layout sizes with block 32 being longer than block 34. Further, there is no suggestion in

Aggarwal that these blocks should be used as having identical layouts to achieve any technical advantage.

In addition, Applicant's claim 30 recites a symmetry axis located between master and image block layouts and the layout positions of the first and second power distribution structures being substantially symmetrical about the symmetry axis. Considering blocks 32 and 34 of Aggarwal's Fig. 6, imagine such a symmetry axis located between these two blocks. Now, looking at the power lines of Aggarwal, there is no showing of symmetry in these power line structures about this symmetry axis. Moreover, Aggarwal does not anywhere teach or suggest introducing symmetry about such a symmetry axis.

The Examiner asserted in this rejection of claim 30 that the phrases "master circuit block" and "image circuit block" sets forth the manner in which the claimed apparatus is intended to be employed. However, Applicant's intention is to claim the structural feature of the image circuit block as having a substantially identical layout to the master circuit block in the claimed structure of the apparatus recited in claim 37. The word "master" indicates a source of the layout that can be used for providing a basis for the structure of the layout of the image circuit block. Only the structural layout of the integrated circuit recited in claim 30 is being described. The words "master" or "image" in no way describe a use of the integrated circuit of claim 30 as is required for *Ex parte Masham* to apply.

Newly-Added Claims

New independent claim 35 recites triplet structures repeated across the electronic device. Applicant's specification (p. 3, l. 17-18) refers to structure 100 of Fig. 1 as having a triplet structure. Applicant's Fig. 3 shows such triplet structures spaced across a device. In contrast, note that Aggarwal's Fig. 6 at most shows power lines grouped in two's or as twin units, and not as triplets. Misawa's Fig. 1 does not show any triplet or twin grouping of power lines. Moreover, neither Aggarwal or Misawa teaches or suggests the use of triplet units for forming a power grid.

New independent claim 36 is formed by rewriting original claim 8, indicated allowable, into an independent form.

New independent claim 38 was formed by combining previous claims 5 and 17. The Examiner asserted in the rejection of claim 17 that the phrase “mirror image” sets forth the manner in which the claimed apparatus is intended to be employed. However, Applicant’s intention is to claim the structural feature of the second circuit block as being substantially a mirror image in the structure of the apparatus recited in claim 38. Stating that an item is a mirror image is a proper and conventional way to describe its structure just as the use of the phrases “box-shaped” or “L-shaped” may describe structure for other types of inventions. Claim 38 does not use the phrase “mirror image” in describing a use of the electronic device of claim 38 as is required for *Ex parte Masham* to apply.

Therefore, Applicant asserts that the “mirror image” recitation should be used to differentiate over the prior art. Neither Misawa or Aggarwal teaches or suggests the layout of circuit blocks that are substantially a mirror image of another block as recited in Applicant’s new independent claim 38.

Allowable Subject Matter

Claims 1-4 and 25-29 were allowed.

Claims 8-9 and 31 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

All dependent claims not specifically discussed above are believed allowable for at least their additional recited limitations in addition to the limitations of their parent independent claim. Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. Any arguments of the Examiner not addressed above are believed moot in light of the above amendments and discussion.

The Examiner is invited to telephone Applicant's attorney ((602) 256-4429) to facilitate prosecution of this application.

Respectfully submitted,

JIN-JER HWAN ET AL.

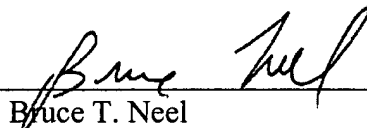
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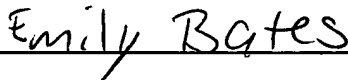
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 1 day of April, 2004.

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